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ART. I.—INTRODUCTION TO VOLUME II.

VAST is the field that lies before us! The systematic investigation of man and his relations to the universe is the labor of ages—or rather (it should be said) is the intellectual delight of countless generations through the vast cycles of time which are now beginning their evolution.

In the first volume of the *Journal of Man*, the preliminaries of this investigation have been arranged. In the present volume a nearer approach will be made to the center of mental philosophy and the specific details of CRANIOLOGICAL, PHYSIOGNOMICAL, and PSYCHOLOGICAL science. In the first volume all has been said that is deemed necessary to explain the ANATOMY OF THE BRAIN and CRANIUM, to correct certain prevalent errors, and show in what manner to conduct the study of practical craniology. So far as these subjects have been presented, they are finally disposed of, as it is not designed to indulge in the repetition of trite and familiar truths. Those who aim to simplify and propagate science among the millions, who are not prepared for the higher forms of truth, may be required to repeat and illustrate in different methods its familiar principles. But such is not the aim of this *Journal*. It desires on the contrary to address in this great republic the earnest seekers of truth who have learned the insufficiency of the world's philosophy and science, and who desire to drink in NEW TRUTH from the exhaustless fountains of nature. These truths are so abundant and so very accessible as to make it necessary that they should flow in a continuous undiluted stream through the pages of this *Journal*. It will not therefore be admissible to go back, repeat, and re-enforce propositions once fully elucidated. Each volume must

be devoted to its own subjects, and those who would study them as already discussed must refer to the back volumes for their elucidation. By pursuing this course, the Journal will present after the lapse of a few years, a compact system of original anthropological science, well adapted for reference and study.

The proper method of investigating the science of man has already been indicated. It has been shown that it is practicable to discover all that we seek to know, by direct experiment upon those whose constitutions are easily impressed and modified by the delicate influence of the nervaura of their fellow-beings; all previous methods of investigation—by craniology, anatomy, pathology, vivisection, metaphysical speculations, &c., must give way to this more successful and accurate experimental method. The phenomena and philosophy of HUMAN IMPRESSIBILITY have been developed in a series of essays—and the reader is now supposed to understand that the true science of the brain rests upon this experimental basis. He is also supposed to recognize those wonderful powers of the human constitution which have been developed in the essays upon PSYCHOMETRY—powers which are to be our great teachers hereafter. Above all, he is supposed to be earnestly, candidly, and fearlessly engaged in the search for truth, and to have laid aside all puerile fear of great truths, because they are strange and wonderful. He is supposed to be willing to learn from any source whatever, where knowledge can be obtained, whether from the laborious accumulation of facts or the bold deductions of genius—whether from the learned authorities who lead the world, or from the humble, the unknown, and the scoffed at who may teach unfamiliar or unpalatable truths—whether from books, or from nature, as observed by himself alone. Each reader is earnestly requested to become an experimental enquirer and to repeat the simple experiments upon medicines, autographs, and the human constitution described in volume first.

If my readers will become patient experimental enquirers, there can be no doubt that they will go on in full sympathy with the progressive developments of the Journal, and occasionally transcending all that they have read, will startle themselves and their friends by the new truths with which they will come into contact. It is earnestly requested that all who have not yet tried the experiment of attraction by holding the hand upon the forehead and gently withdrawing it while the person stands erect, will take occasion to make this simple experiment upon a number of their friends. The experiment upon medicines is also earnestly recommended to all. (Take, for example, Jalap, Opium, Morphine, Capsicum, Lobelia, or any other medicine of strong and well known powers, or, if medicines are not convenient, take common pepper, mustard, salt, sugar, snuff, cloves, or any other substance which has decided properties, conceal it in paper, place it in contact with the hands of impressible persons, with their muscles in repose, and await the result.)

ART. V.—GALLIAN PHRENOLOGY—AND THE NEURO-LOGICAL SYSTEM.

THE system of Phrenology which is now in existence, contains the rudiments of a great science. In reference to this, I may say that I aim not to destroy, but to complete the fabric of which Gall laid the foundation. He was the great architect who showed us where to build—who dug the foundation with his own hands, and commenced the walls. He taught us that man was to be studied in his brain, which is the true seat of his life, and by his own original genius *created* the science of Phrenology.

He is the only man in the world's history who, from the midst of ignorance and chaos, *created* a science by his own daring genius. And as that science is at the summit of human sciences (being the science of man), I affirm that to future generations the name of Dr. Gall will stand in solitary pre-eminence. He has no compeer in the history of the world—he has undertaken more, and he has accomplished more, than any of his predecessors. And yet he has not introduced a complete or systematic science of man. The science of Phrenology is but a *mental science*, and treats of man merely as an intelligent being—it treats of the mind and not of the body. It speaks of the brain, but merely so far as may be necessary to show how mind acts through it. With man as a physical being—with the laws and powers of his muscles, his blood-vessels, and his viscera, phrenology has little or nothing to do.

But man is one-half a physical being and one-half a mental being—Phrenology is therefore but one-half of the science of Anthropology.

Phrenology has its practical bearing upon morals, education, and government, but it has little direct bearing upon the laws of health and disease—the laws of diet and regimen—the materia medica and the practice of medicine.

Phrenology, therefore, is not the science of the brain—it is but one-half of that science. We find the brain to be an organ of physiological as well as of mental powers. It governs every portion of the body—it is the brain that moves the arm—it is the brain that governs the circulation of blood throughout the body, and brings the blush of modesty to the face, or sends the blood in rapid currents through the body, under the influence of passion. It is the brain that governs our breathing, the digestion of our food, the growth of our body, and everything that constitutes the physiological life of man.

The science of the brain is, therefore, the science of physiology as well as the science of phrenology—we look to the brain for the seat of reasoning power, or memory, or language, and we ask what part of the brain is injured, when these faculties are lost—but we also look to the brain for the seat of voluntary muscular power, and ask what part of the brain—what part of the opposite hemisphere has failed, in a case of paralysis of an arm or leg.

We may look to the brain for the elucidation of every question in physiology, and of every question in phrenology. We should look to the brain for everything in man. Hence, Neurology, or the science of the brain, is the whole science of man—the true Anthropology, and may be divided into two departments—phrenological and physiological.

Our system of phrenology differs from the Gallian system in eight essential particulars.

1. Its basis and evidence are totally different.
2. Its extent is incomparably greater.
3. Its organology is widely different.
4. Its philosophy is new and essentially different—presenting different views of the antagonism, co-operation, modality, and sympathy of the organs, as well as their relations to good and evil—to the body—to the material and spiritual worlds.
5. Its morbid department, or doctrine of insanity, is entirely new and peculiar.
6. Its corporeal relations are entirely a new discovery, and a peculiar doctrine.
7. Its pathognomy is in many respects peculiar.
8. Its psychometry is totally different, being a new discovery.

In fact, the points of difference are more numerous than the points of resemblance, for although we recognize the greater part of the old system as true, it is overshadowed by the mass of novel facts and principles which have been developed.

1st. As to the basis of Phrenology.—The Gallian system rested upon an inaccurate foundation. The functions of the brain were determined by comparing the development or protuberance of the *skull* in different persons with their characters, going upon the presumption that the most protuberant part of the head indicated the largest organ in the brain, and that the largest organ of the brain formed the predominant element of the character. Neither presumption is strictly true. I have already shown that the skull continues developed or protuberant, when the organs have subsided or grown inactive; and that consequently, whenever the brain is not in a uniform state of activity, the development of the skull does not indicate the development of the organs; and forms no guide to character. These are not mere exceptions to the general rule; on the contrary, I believe that the majority of the criminals that infest society and fill our prisons, are illustrations of the fact that the moral organs may become inactive, and the character may widely depart

from the development. I deny that it is *always possible* in America to distinguish the convict and felon from the good citizen by the form of his head. I speak from observation.

And even if the skull remained through life of a uniform thickness, I deny that the development, or size of the different organs, even when correctly ascertained, would *always* indicate the true character.

Man is the pliant subject of education and habit—it is seldom that he has the energy to rise above the force of the circumstances which surround him in society, and determine his career. The largest organs may be made inactive, and the smaller organs may be trained to predominate and govern the whole constitution. Hence, in many cases, it is not the development of the brain so much as the trained energy or vitality of the different organs, which determines men's career in life.

The eminent men of every nation are not pre-eminent merely from their superior craniological developments. The same developments which they possess, may be abundantly found in the humbler ranks of life—for every Napoleon, or Byron, or Scott, or Burns, we may produce thousands upon thousands with heads as large and as favorably developed, who are quietly employed in the humble pursuits of agriculture, manufactures, and commerce, without ever suspecting themselves to have been born for any eminent destiny. To speak craniologically, we may well say, in every village churchyard

“Some mute inglorious Milton here may rest;
Some Cromwell, guiltless of his country's blood.”

Go on the turnpike or on the canal, amongst men oppressed by toil, and you will sometimes find the head of a Zeno or a Socrates—heads far superior to those of the men who are high in society, and whose career is flashing in the eyes of the world.

Though there may be “a destiny that shapes our ends,” it is not by the skull alone that they are shaped—the power lies deeper within.

Calculations based on the skull *alone* cannot be *strictly* true. Yet it was on this uncertain foundation that phrenology was erected—on the development of the skull, which does not always indicate the development of the brain, and on the supposed predominance of the protuberant organs, which do not always indicate the character, even if correctly ascertained. Every phrenological observation then was doubly liable to error, even if made by the most accurate observer, and still more from the fact that it is difficult to estimate developments with accuracy, that different practical phrenologists may differ widely in opinion.

When I first obtained an accurate cast of the skull of Spurzheim, a practical phrenologist of considerable reputation, who saw it for the first time (without knowing from whose head the cast had been

taken), was struck with a predominant development of Destructiveness, and remarked with earnestness, that such a man would murder continually. Yet when his head and skull were examined by the phrenologists of Boston and Edinburgh, they arrived at no such conclusion, but gave him a most excellent and amiable character, by inference from the same developments which suggested murder to one who did not know that it was Spurzheim.

A skull exhumed at Rome, passed for a long time as the skull of Raphael, and Dr. Gall remarked upon it a large development of the organ of "talent for the arts," which we have since called Constructiveness. A British phrenologist, presuming upon the identity of this skull, wrote a long essay, commenting upon its developments, and pointing out their exact correspondence to the character of Raphael in the minutest particulars. It proved to be the skull of a Spanish gentleman, a patron of the arts, but not a man of distinction for any genius. Doubtless there are many other skulls upon which the character of Raphael might have been given, and all his peculiarities accounted for by the application of the old, vague and elastic system of phrenology, the votaries of which had so great a facility in accounting for the deficiency of organs necessary to the known character, by the presence of some other organ or combination of organs, which would be made to produce the same result, in spite of the true principle that the function of each organ is peculiar, and admits of no substitute.

For these reasons, phrenology could not command the cordial assent of scientific men—its data were too vague and inaccurate. It is true the fundamental principles of the science were rationally demonstrated, and its details were sustained by an array of *very strong probabilities*, much stronger indeed than those by which many of the prevalent doctrines of medical science were sustained, but the caviling skepticism, which has ever been the dominant spirit of scientific bodies, would neither appreciate the force of this evidence nor seek to ascertain its reality.

How, then, did it happen, that phrenology became a science at all, when every step was tottering and uncertain? It was solely through the force of the genius and labor of those profound masters of anatomy, Gall and Spurzheim—and to them it was the labor of a lifetime.

As an eminent chemist investigated the profoundest problems with but a sixpence worth of apparatus, so in Gall the force of genius overcame every difficulty. But all the talent that has been given to the science since its promulgation by its founders, has not established any very material additions or changes in human phrenology. We honor the genius of the founder of phrenology the more, when we discover his inadequate means—but at the same time we must be aware that the Gallian phrenology could never have ranked among the certain or exact sciences.

In phrenology, the present time is the commencement of exact

science. When, in the spring of the year 1841, I discovered the impressibility of the brain, there was the end of the inferential period, and the commencement of positive science. We now reject everything that gives but a probable result, and seek for absolute certainty. We lay aside craniology as too tedious, too vague, and too uncertain for a science, and say that we will not consider the function of any organ as determined, until we have the same degree of evidence which physiologists have for the functions of different nerves. They determine the function of a motor nerve by stimulating it with galvanism, or by irritating it mechanically, and thus making it exert its power to set a muscle in motion—so they determine the functions of a sensitive nerve by irritating the nerve, to see what feeling is produced, or by cutting it away to see what feeling is lost.

It is in the same manner that we determine the functions of the brain. We stimulate the convolution to see what power it will display, or we arrest its action to see what power is lost. If but one human being possessed the impressible temperament, we might in him learn all the laws of life, by developing every organ. In the history of medicine, we know of but one case in which a physician has been able to get into the stomach, and experiment upon it in its living action. It is the case of St. Martin, whose stomach was opened by a wound, and was made a subject of experiment by Dr. Beaumont. The results of that single case are universally received as elucidating the gastric functions. Now we not only experiment upon one, but upon as many as we can find time to attend to, and we arrive at uniform results—results which can be confirmed by every one who undertakes the same species of experiments. We have a better foundation than the physiologists, because our experiments are more easily performed, and therefore more numerous and satisfactory. As a science of experiment and exactness, Neurology ranks with chemistry and with natural philosophy.

Propose this subject for the first time to a man of sound, uncorrupted, unprejudiced common sense, and he will reason thus:

“It is affirmed that all the functions of the cerebral organs can be discovered by externally exciting them. The preliminary fact to be ascertained is, whether the brain can be excited in this manner. If we see any organ thus excited—any positive and satisfactory effect produced in a single instance, it is proved that such an excitement is possible, and if one cerebral organ is excited, it is probable that other organs in the same individual may be excited by similar means, and that all the functions may thus be discovered. It is affirmed that they have been discovered, and I am willing to admit the general truth of this discovery, when I am sufficiently assured by observation or by testimony, that any such facts exist.”

This system of certainty it is proposed to substitute for the old system of probability.

The second and third points of difference will naturally be considered together.

Our organology is different, and its extent far greater.

Gallian phrenology recognizes 35, 6 or 7 faculties of the mind and organs of manifestation, and supposes that all the varieties of human feelings, character and conduct arise from different combinations, or different states of activity in these organs.

I deny that the brain consists of merely 36 specific organs, and that these organs are adequate to explain the varieties of human nature. I deny this limited mechanical organology—for it is not supported either by anatomy or by reason. I affirm that the brain consists of a large number of convolutions, and that every convolution possesses a different function, being separated on each side from its neighbor by membranes, but that every convolution is connected with the others, and none are cut off as entirely distinct organs. The adjacent parts of a convolution possess similar functions, and where two convolutions run together, their functions beautifully blend.

As far as we can carry on our investigations, it appears that every fiber and every group of fibers, has a different function from every other fiber and mass of fibers in the brain—that those fibers which are nearest together and anatomically connected, are most similar in their functions, and those which are farthest apart, most dissimilar—those in opposite regions of the brain possessing antagonistic powers—in short, that the whole brain consists of a mass of blending functions running through all the varieties and extremes of human nature, and so situated in the organs that congenial faculties may co-operate—that the laws of association may exist, by means of which one idea brings in another to the mind—one passion excites and one checks another, and the whole multiplex apparatus works together in a divine harmony.

This is the obvious truth—the brain is not a single organ, as was supposed before its anatomy was known—nor yet a bundle of 30 or 40 organs, as imagined by phrenologists, because they could not discover any more through the skull, but is a VAST HARMONICON—a multiplex mass of fibers (or organs, if you prefer the term), as numerous as the stars in the heavens—as various as the moods of the human mind, and yet in perfect order, so arranged that congenial faculties may be grouped together and susceptible of the most simple and convenient classification for the study of man.

We should reject the old mechanical organology as beneath the dignity of science. It is but the first struggle of the student of nature toward the truth which we now have in possession. We should regard all divisions as arbitrary, and designed merely for the convenience of the student. They shackle the luxurious freedom and abundance of nature.

Were it practicable to teach the science without these mechanical aids, I would not mark a single line upon the head to bound any region and separate it from another, for there is no region which is entirely separated in the brain.

If, then, we contemplate the facts of the science as developed in the functions of the convolutions, their globules and fibers, it is infinite! We may prosecute the investigation as far as we please, by division and subdivision, and we shall find that there is no boundary, no outside, no end to the research—as well might we seek for the walls of the universe.

But let us come back to our three dozen organs, and see what becomes of them in this sudden development of Anthropology. We shall find them all in the right place, and very nearly where they stood before.

Every faculty that has ever been ascribed to man by poets, orators, or philosophers (and many that have never been suspected), will be located in their true position.

The organs discovered by Gall and Spurzheim undergo but little change.

Each of the functions which they recognized lies very nearly as they located it, and in their definitions of the organs, *when we have given them their correct locations*, little is found which demands correction. In the intellectual region we are indeed surprised to find how accurate have been the discoveries of craniology. Calculation, Order, Color, and Weight are precisely as before—Locality and Size a very little lower; Form extends a little higher and lower; Individuality or the recognition of objects occupies less space than was supposed, and we do not separate it from Form as it is really the same thing. In the original description of Gall it was recognized as an organ of considerable mental power, being called “Educability,” owing to the development of which animals are capable of receiving instruction or knowledge. In this view he was correct. The region which he marked as the Sense of Things or Educability, which was subsequently called Individuality and Eventuality is really the seat of high intellectual powers and capacities of improvement. The special function ascribed to Individuality is really a function of the organ of Form, which occupies almost exactly the same location which was given to Individuality. The functions ascribed to Eventuality do belong to that region. The Memory which practical phrenologists, despite the theory, would ascribe to Eventuality, is the principal function of that region. Time stands unchanged.

Comparative Sagacity, as Gall termed it, may still be recognized in the same place, although we prefer the simple name Sagacity, while phrenologists have recognized it by the title of Comparison.

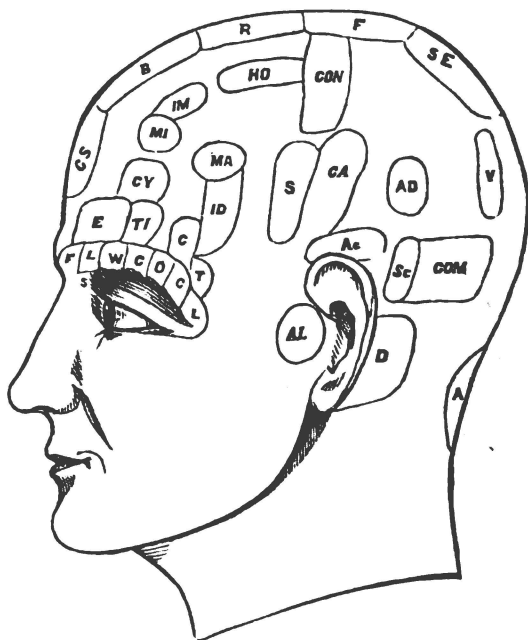
Causality, if regarded as the reasoning power, occupies about the same position, but if considered simply as the power of tracing the relation of cause and effect, it occupies a smaller space, nearer Eventuality.

Mirthfulness lies higher on the forehead and vertically above the eye. In its old location there is something sprightly, shrewd, and vivacious, but not fully entitled to this name.

Ideality occupies a smaller space, mostly at the front of its former location.

Invention, or Constructiveness as it was improperly called, occupies the position assigned to Music or Tune and that organ is just below its former locality, below Invention instead of above it.

Language is recognized as developing itself a little farther back than before—at the outer angle of the eye—the location in which its development was remarked by Dr. Gall. How slight the changes here in rectifying a system based on mere craniology!



(EXPLANATION.—F, S, L, W, C, O, C, L, Form, Size, Locality, Weight, Color, Order, Calculation, Language. E., TI., Eventuality, Time. C. S., Comparative Sagacity. CY., Causality. T., Tune. ID., Ideality. MA., Marvelousness. MI., Mirthfulness. IM., Imitation. B, R, F, S E., Benevolence, Religion, Firmness, Self-Esteem. HO., Hope. CON., Conscientiousness. S., Sublimity. CA., Cautiousness. Ac., Acquisitiveness. Sc., Secretiveness. COM., Combativeness. V., Vanity. AD., Adhesiveness. AL., Alimentiveness. D., Destructiveness. A., Amativeness.)

Among the affective organs we observe Benevolence, Veneration or Religion, Firmness, and Self-Esteem, which undergo little if any change. Conscientiousness has about the same location still. Hope a similar location, occupying less space, but farther forward than located by Spurzheim, and a similar remark is applicable to Imitation and Marvelousness. They lie in the region that was assigned them, but they do not fill it. Thus nearly one-half of the upper surface of the brain is left unoccupied.

On the side, Alimentiveness occupies nearly the same location;

Cautiousness occupies a portion of its former site; so does Secretiveness. Acquisitiveness lies farther backward and lower than located by Spurzheim; Sublimity occupies a part of the space assigned it, and Destructiveness manifests its violent character in the lower part of its site. Combativeness occupies a similar and smaller site; Adhesiveness occupies a smaller space farther forward. Vanity lies farther back. Philoprogenitiveness may perhaps be recognized in a small part of the organ so called, but not with so kindly a feeling as supposed, those kindly feelings lying really among the moral organs. Amativeness occupies the center of its location on the median line. Concentrativeness and Inhabitiveness are transferred to the region which has been called Cautiousness, on the sidehead.

Thus, we perceive, by condensing organs to their true size a large space on the cranium is left unoccupied. The changes in the essential location are few, and the progress of discovery shows that in almost every instance the organ has been located so as to cover the spot actually occupied by the function, around which lie congenial functions easily associated with it. The most exceptionable locations have been those of Philoprogenitiveness, Mirthfulness, Constructiveness, Tune, and Acquisitiveness which have been placed entirely off the true ground. Language, Adhesiveness, and in some busts, Cautiousness and Hope, are nearly as much out of the way, and Marvelousness, as located by Spurzheim, is entirely mislocated, excepting that its outer edge covers the true location.

As to the mooted organs of Concentrativeness and Inhabitiveness—we find the love of home and country on the parietal ridge in the cautious region, and the concentrative tendency in the same group, while their imaginary location below Self-Esteem possesses powers co-operative with these and strengthening to the mind. The love of life we find to occupy, as was supposed, the basis of the brain, but it is not merely a love of life—there is a vital power or absolute tenacity of life produced by this development. Thus after locating all that was recognized by phrenology, we have about half the cranial surface left open for discovery, and the whole of the basilar regions covered by the face and neck.

4. Its philosophy is new and essentially different. Man is not regarded as a bundle of organs, passions, or faculties, which have no systematic relations to each other, and which constitute no unbroken circle of powers, but is considered a being of unlimited relations possessing organs by which he sustains these relations with all that exists in the universe,—which organs have the same full-orbed development—the same peculiar connection and intimate relations as exist in the external world and render it a connected, harmonious whole. By these organs man is adapted to his situation in the world, and is made susceptible of an endless variety of development in conformity with the situations into which he is thrown.

The relations of these organs to each other, like the relations of the powers and phenomena of nature, are antagonistic. As in nature attraction and repulsion, heat and cold, expansion and condensation, growth and decay, action and reaction, life and death—are continually by their alternating predominance producing all the phenomena that we witness, so in man antagonistic powers continually act and react constituting by their varied results, the whole history of his life. Every passion or tendency of his character is balanced by an opposite passion or tendency. The conscientious tendencies struggle with the base, the courageous with the cowardly, the wakeful with the drowsy, the sensitive with the hardy, the energetic with the relaxing, the healthy with the morbid, &c. As physically there is no direction which has not its opposite, so morally there is no element or tendency of mind which has not its opposite. These opposite tendencies are located in organs anatomically opposite in position, and as these various faculties occupy the whole circle of life, each organ must have its congenial or similar organs, as well as its antagonistic, and between these similar organs, situated near together, there is an association or co-operation of action by which they assist and modify each other's manifestations. By this complicated system of "checks and balances"—by the mutual modifications, restraints, and associations which it produces, we can account for much that is otherwise unintelligible in man.

Upon the old system no faculty had any specific antagonism to another, but each acted without any restraint, except as its gratification brought it into collision with another, whether that other were of a similar or opposite character. There was a confused arrangement of faculties and what would be the result of any particular development upon the character was not very easy to determine, as it was difficult to tell what would be the sphere or limit of each organ and how their interfering action would result. Hence the phrenological sophistry, so often resorted to, in explaining a particular head to suit a particular character.

In the old system there was the fundamental error of recognizing positive organs to produce positive effects, and leaving positive effects of the opposite character to be accounted for without any organic cause. Thus while it recognized Marvelousness as capable of producing a credulous belief of wild absurdities, it recognized no faculty to produce the opposite effect—a disbelief and hatred of the wonderful. The two elements of character must then be arrived at by the presence or absence of large Marvelousness. But when we find that a small organ of Marvelousness is sometimes accompanied by a predominance of faith, and that a large organ is sometimes less influential in controlling the character than a small one, it is obviously necessary to look for a power which in one instance controls Marvelousness, and in another being deficient, leaves Marvelousness unchecked. As well might we attempt to account for all the generous deeds, the sympathizing kindness, and the violent murders

of society, by the mere presence and absence of Benevolence (omitting Destructiveness) as to suppose that all the passions and traits of human nature can be accounted for by half as many organs, supposing that these organs originate one-half of our faculties or passions, and the other half are originated by the absence of organs—in other words by nothing. Thus on the old system an organ was recognized to produce Mirthfulness or humorous gayety, but the opposite state of sadness, equally marked and important, was not ascribed to any organ. If it had happened that an organ of sadness had originally been discovered, the discovery would have stopped there, for then an organ of Mirthfulness would have been considered superfluous. Mirthfulness would have been produced by the very small organ of sadness. The intrinsic absurdity of such principle is sufficient alone to excite our mirthfulness without the assistance of a small organ of sadness.

If an organ is considered necessary to account for the domineering pride of arrogant men, why not an organ also to account for the abject humility of others? How small an amount of self-esteem will make a man servile? How small an amount of servility will make him proud? In other words, to adopt a physical illustration, if ten pounds of salt and ice will be capable of freezing a pint of water, how small must be the quantity of that salted ice that would make the water boil? If small Self-Esteem will produce servility, would it not be as reasonable to say also that small servility would produce a proud character? And would not very small servility and very small Pride, in conjunction, produce very strong manifestations; and would not upon this reasoning the total absence of each organ produce the highest manifestation of both? Would not the total absence of all our organs produce the highest manifestations of their opposites and thus be equivalent to the largest development.

We must lay aside this subtle delusion—that the absence of an organ produces any positive effects. The absence of an organ only removes its powers, and leaves the opposite organs to produce the opposite effects. The absence of Love is not Hatred and the absence of Hatred is not Love. On the old system neither of these was recognized as belonging to a particular organ, although something very similar to Love was ascribed to Adhesiveness, and something similar to Hatred to Destructiveness.

By these great omissions—sometimes recognizing an organ and omitting its antagonist (as Cautiousness without Rashness)—sometimes omitting both (as Hardihood and Sensibility, Patience and Irritability, &c.) and omitting generally the organs which produce physiological effects, the system had so imperfect a development as to defy profound philosophy and produce dissatisfaction in every bold analytical inquirer.

Not feeling the necessity of recognizing an organic cause for every trait of character, the extreme and most interesting phenomena of human nature were repudiated as not being essential parts of the

plan of humanity—as if the liability to evil was not an essential part of the plan as well as good. We avoid this error by simply interpreting Nature as we find her. We take the results of organs when they are unrestrained as their true tendency and name them accordingly. If one organ operating unrestrained produces Religion, and another produces Murder or Robbery, each is equally entitled to be named from its effects, although its pure effect may seldom be seen.

But in recognizing antagonist organs by their extreme results, we do not recognize them as equally efficient and conspicuous. As in the harmony of nature one set of forces overrules another (on our globe, for example, gravitation overruling all the centrifugal and irregular powers which oppose it), so in the human character, the upper posterior region of the head generally controls the whole system, and in all men the upper portion of the brain *should have* a very decided and uniform preponderance over the lower. Thus while we recognize the capacity for evil as an essential part of humanity we recognize it only as a subordinate part, destined like the imprisoned steam and fires of our rapid boats to answer an important purpose while thus kept under firm restraint.

Thus instead of a few—a very few cramped developments of humanity—we sketch the full development of every elemental tendency, and thus present the long and imposing array of passions, sentiments, faculties, appetites, emotions, and vital powers which are so wonderfully combined in man.

In the revolutions of our globe every particle tends by its centrifugal power to fly afar toward the sidereal worlds by which we are surrounded. From this it is prevented by the centripetal power—the attraction of antagonist atoms which on the opposite side of the globe tend equally to fly from the center toward the void distances, in an opposite direction. Thus is the centrifugal tendency of each atom held in check by the antagonistic atom with an opposite centrifugality. And thus do the antagonistic elements of humanity restrain each other in a proper sphere. In our analysis we cause each tendency to be freed from its opposite and spring forth in full career to show by its independent course what is its goal. Our system is, therefore, both the analysis and the full development of humanity.

Our philosophy is equally peculiar as regards *modality*, co-operation, antagonism, sympathy, and association.

The old system recognized a few primitive faculties, and supposed all other faculties to be but combinations or modes of action of those which it recognized. In this respect it shared the faults of the metaphysical systems against which it warred. The metaphysician recognized a few primitive faculties, and by various modes of action in those faculties, he explained all moral existence. The phrenologist made no other improvement upon this than to enlarge the number of faculties. But as his faculties increased in number

they diminished in clearness and philosophical simplicity, while he was still compelled to suppose as many qualities and modes of activity as before. The new system recognizes a specific character in an organ and explains all its various manifestations by the various organs associated with it. It presents an extensive system of combination, co-operation, and reaction among the organs. In doing this it brings out in bold relief a fundamental principle—the unity of the mind—too much overshadowed in the old system. In short, it sustains and illustrates the true metaphysical system derived from consciousness.

5. Our morbid department or doctrine of insanity is different. On the old system, insanity was not accounted for. It was a disease of the brain, a derangement of the action of the organs. Yet disease of the brain has so often existed without any insanity, that this explanation was very unsatisfactory.

Insanity is a very peculiar state of mental excitement. So is Pride, or Hope, or Anger. Murder and theft, love and religious fanaticism are referred to particular organs, and when we adopt the principle that peculiar states of mind must be produced by particular organs we cannot consistently set that principle aside. Insanity has as good a right as Fear, or Murder, or Religion to a place in our catalogue. But it will be said, Insanity is not an independent propensity, it is merely a condition of other propensities and faculties. Suppose it is, this does not diminish its claims to an organ. We have no independent propensities or faculties—that idea is an error of the old system. We have no organs which can manifest themselves without the others. Take away the associates of an organ and that organ is a nullity—an inconceivable absurdity—it has no possible mode of existing, of acting, or being acted upon, or of making any manifestation. There must be a human being—all the essential organs of a man, before there can be any organic action, and the action of each organ consists of putting the rest of the brain and body in action in a manner *peculiar to itself*—producing a series of combined excitements or actions, which no other organ could produce. This power of producing a particular condition of the brain or body—a particular state of all the organs and a particular class of acts is what constitutes a distinct and peculiar human faculty, such as belongs to a peculiar organ. Whether this condition of the mind be a strong or weak, good or bad, sound or unsound condition, if it be peculiar and distinct from other conditions, it must be ascribed to an organic cause. The conditions produced by the different organs have various degrees of soundness. The conditions produced by Firmness and Conscientiousness are sounder than those produced by Veneration or Ideality; these are much sounder than those produced by Fear or the violent anger of Destructiveness, which is very nearly akin to insanity. The unsoundness of the intellectual condition produced by Insanity is no better argument for rejecting *it*, than the unsound moral condition,

produced by the propensities for murder and theft, would be for rejecting them. These evils belong to the arrangements of nature. We have faculties which are not moral and which are not intellectual. If we had not we should always be purely moral, and intellectual beings. These faculties have organs and the organ of Insanity is one of them. By this development we determine the natural soundness or unsoundness of mind, and constitutional tendency to insanity, of which the old system knew nothing.

6. The doctrine of relations between the brain and body is entirely new. The old system did not even trace the apparatus of voluntary control of the brain over the body, the apparatus of the Conductor organs and Restraint, which determine the transmission or suppression of cerebral influences.

We have a system of connection and correspondence between brain and body, which points out their exact relations and sympathies—which traces the effect of every disease of the body upon the brain and mind, and the influence of the brain in controlling the excitement and growth of every part of the body—in short, an exact science of the relations between mind and matter.

7. The new system of Pathognomy departs materially from the views of Gall and Spurzheim as to the natural language of the organs, and carries out the principles of expression and gesticulation to an extent never before attempted.

8. The Psychometry, or measuring of the mental faculties, is entirely novel. We repudiate Craniology as an *accurate* indication, and rely especially upon the power of the impressible temperament to feel the influence and action of each organ, so as to determine the exact natural and acquired character.

The old system spoke vaguely of the outlines of character—the new speaks with the precision of natural history.

The old system made some remarks upon natural language—the new presents an exact mathematical science of Pathognomy, a science of vast extent and beauty.

The old system took no notice of the relations between the mind and body—the new traces all the relations of the mind to every part of the body, throwing a brilliant light upon the whole constitution of man, the philosophy of disease, of character, of temperament, and of hygiene.

The old system knew nothing of insanity—the new system explains it and points out the predisposition.

The old system as to its philosophy was unfinished and unsatisfactory—the new charms by its comprehensive simplicity,

The old system presents a limited organology—the new an unlimited development and analysis of human faculties and organs. It leaves nothing untouched and presents no fact or principle which is not elucidated by the other portions of Anthropology.

The general truth of the old system could be made certain only by a great number of observations, not one of which was free from

uncertainty or error. The new system bases every doctrine it teaches upon direct and full demonstration by experiment, and while it enlarges and corrects our conceptions of man, while it expands our minds by vast and beautiful conceptions, it also satisfies us by its extreme simplicity, and by removing every doubt in its demonstrations enables us to take our stand upon this as a positive science, from which we advance still farther into the unexplored and unknown.

ART. III.—REICHENBACH ON ANIMAL MAGNETISM.

I HAVE much pleasure in laying before the readers of the *Journal* the following extract, from the writings of the profound and accurate chemist, Baron Reichenbach, who, as the reader will perceive, has verified many of my own experiments and doctrines. My discovery, in 1842, of new imponderable agents, was effected by a different process from that of Reichenbach, and my views of the Northern, Southern, Eastern, and Western lines of magnetic influence, though similar to his, would be modified by the influence of vertical lines, which he seems to have overlooked. When suitable leisure offers, I shall endeavor to give this subject a fuller explanation.

I must also remark that water has important attractive and powerful influences over the impressible constitution aside from its magnetic condition described in paragraph 73. By investigating this subject I think I have arrived at a satisfactory explanation of Bletonism or water witchery.

The common method of testing impressibility, which I practiced for several years, by passing the hand or fingers over that of the subject, and producing in his a sensation of coldness, is described by Reichenbach in paragraph 80. The sensation of warmth of which he speaks belongs to a constitution of but moderate impressibility—those of high impressibility always perceiving a sensation of coolness. The transmission of the *NERVAURA* into and through metallic bodies, which he describes in paragraphs 81 and 82, was one of the methods which I first adopted, in 1841, for testing impressible constitutions. Reichenbach speaks of transmitting the current through a wire $4\frac{1}{2}$ or 9 feet long, but I have frequently transmitted the current through wires of fifteen or twenty feet, and have no doubt that, under suitable circumstances, a current of several hundred feet in length might be distinctly felt. Not only may the passage of the *nervaura* through metallic wires be recognized, but its specific character may be determined with great accuracy, if it be transmitted from different regions of the head. It may also

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be recognized by the sense of taste. Thus a short metallic bar applied to the tongue produces a distinct nervauric impression, when grasped by the hand, which those of delicate sensibility will readily recognize.

Section III.—An attempt to establish some fixed physical laws in the varied phenomena which have been called Animal Magnetism.

(Extracted from Gregory's Translation of Reichenbach's Researches.)

57. A retrospect of the last section, which is necessary for the connection with it of this one, yields the following points as established:

a. Every crystal, natural or artificial, exerts a special action on the animal nerve, feeble in healthy persons, powerful in many diseased individuals, strongest of all in cataleptic cases.

b. This influence is seated chiefly in the axis of the crystal, and being most active at the opposite ends of the axis, is consequently polarized,

c. At the poles light is sent forth, visible to eyes rendered preternaturally acute by disease, especially by nervous disease.

d. In certain diseases, the crystal attracts or solicits the hand of the patient, by a kind of attraction, analogous to that of the magnet for iron.

e. But the crystal, in virtue of this peculiar influence, does not attract iron, has no tendency to any peculiar direction, when freely suspended does not attract the magnetic needle, and induces no electric current in a coil of wire. The new influence or force is, therefore, not magnetism.

f. The force may be transferred to other bodies, which may be charged with it by contact.

g. Matter possesses, some degree of coercitive power in regard to this force, so as to retain it, but only for a limited time, within which the charge disappears.

h. Different bodies conduct it, with different degrees of facility.

i. The power, in matter, of being charged with this force, is directly proportional to the strength of the force in the crystal employed.

l. The force, differs qualitatively, at the opposite poles; at the—M pole causing a sensation of coolness, at the + M pole, one of warmth. Quantitatively, the—M pole (pointing, in the magnet, to the north), is weaker than the + M pole.

m. No perceptible change has hitherto been produced in regard to the force, by warming the crystals.

n. In the powers exerted by magnets, this force is included, and forms, therefore, a part of those powers which may be isolated.

58. Such are the laws, hitherto developed, of this new force.

Let us now try to apply them to another series of phenomena, and thus give them greater extension.

From time immemorial, certain unexplained phenomena have been known, produced by the action of the magnet on many sick persons, and especially on somnambulists. In the last century it was discovered that similar phenomena could be produced without the magnet, and, indeed, by the human hand alone. It was found impossible, in the actual state of our physical knowledge, to trace any certain connection between the power of the magnet and that of the human hand, &c.; or to recognize any uniform law in the phenomena. The consequence was, that scientific men neglected the subject, and did not admit it as a branch of physical inquiry. Individual physicians, and lay amateurs, partly kept alive the tradition, partly added to the heap of unconnected observations. For want of a better name they called it *Animal Magnetism*, a name not well chosen, because the phenomena so called do not agree with those of magnetism, in the strict sense of the word. Numerous works have since that time appeared on the subject, chiefly written in a medical point of view. A few are good; many partial and one-sided; many, again, such as cannot be read with patience.

The author has avoided the study of this literature in order to retain an unfettered judgment, and to raise his work on the foundation of his own observations. He has studied the subject in a physical, not in a medical, point of view, being convinced that thus the investigation will be more successful, and that whatever is discovered, may easily be applied hereafter.

59. Having detected in crystals a force, which, although quite different from magnetism, yet exhibited a very marked analogy with it; and considering, on the other hand, that *Animal Magnetism*, although likewise different from ordinary magnetism, yet showed a similar analogy to it, he was led to inquire whether he could discover any common properties in the phenomena of these two forces, and to what extent? And also, whether *Animal Magnetism*, like the crystalline force, might not be subject to physical laws? As crystallization seems to mark the transition from organic to inorganic nature, he ventured to hope, that by experiment he might discover a point of connection between *Animal Magnetism* and *Physics*, or perhaps even obtain, for *Animal Magnetism*, that firm foundation in physics which had so long been sought for in vain.

60. But to prepare the way, it appeared, before all things, necessary to ascertain the part which in all these phenomena is played by *Terrestrial Magnetism*. If a magnet or a crystal produces so decided an effect on sensitive persons, it is certain that the magnetism of the earth, which gives the needle its direction, cannot be without influence on the animal nerve. And thus it was obvious, that it would be impossible to obtain any pure result from any experiment as long as this powerful agent, which must act in some way, was not subject to measurement and calculation, with a view

to its elimination. With this idea, trials were made with both healthy and diseased individuals, as M. Schuh, M. Schmidt, surgeons; Mad'lles. Nowotny, Sturmman, Maix, Reichel, Atzmansdorfer, and others, in different circumstances and at different times.

61. M. Schuh had, in the house then inhabited by him, the singular custom, when he awoke early in the morning, of regularly turning himself in bed, so as to place his head where his feet had been; on doing this, he invariably fell asleep again, and this second sleep, contrary to the usual opinion, was to him far more refreshing than the whole sleep preceding it. If he omitted this, or lost his second sleep, he felt weary all day, and thus this strange custom had become a necessity for him. The author inquired, and found that the position of the bed was such, that the head of the sleeper, in his ordinary position, that is, the head of the bed, was directed to the south, the feet to the north. He advised the turning of the bed into exactly the opposite position, with the head toward the north; and from that time, the necessity for the second sleep never returned, the ordinary sleep was refreshing and sound, and the custom above mentioned at once given up.

62. M. Schmidt had experienced, in traveling, a chill in the right arm, and had suffered for some time from violent rheumatism, with most painful cramps, from the shoulder to the fingers. He was treated by his physician with a magnet, which relieved the cramps, although they always returned. He lay then with his head to the south; on the position being reversed, so that he lay in the magnetic meridian with his head to the north, he immediately felt comfort and relief. Instead of shiverings, he now felt an agreeable uniform warmth, the passes with the magnet were now much more cooling and beneficial than before; and before the author left him, the stiffened arm and fingers were quite movable, and the pain had disappeared.

63. On examining the position of Mad'lle Nowotny, she was found lying almost exactly on the magnetic meridian, her head toward the north. She had instinctively chosen this direction, and it had been necessary to take down a stove to allow her bed to be placed as she desired it to be. She was requested, as an experiment, to lie down with her head to the south. It took several days to persuade her to do so, and she only consented in consideration of the weight which the author attached to the experiment. At last, one morning he found her in the desired position, which she had assumed very shortly before. She very soon began to complain of discomfort, she became restless, flushed, her pulse became more frequent and fuller, a rush of blood to the head increased the headache, and the sensation of nausea soon attacked the stomach. The bed with the patient was now turned, but was stopped half way, when she lay in a magnetic parallel, with the head to the west. This position was far more disagreeable than the former, indeed, absolutely intolerable.

erable. This was at half-past eleven, A. M. She felt as if she would soon faint, and begged to be removed out of this position. This was done, and as soon as she was restored to the original position, with the head to the north, all disagreeable sensations diminished, and in a few minutes were so completely gone, that she was again cheerful. But beside these very disagreeable feelings which acted profoundly on her, in the altered position, all her sensations, in regard to external matters, were altered. For example, the streaking with a magnet, usually so agreeable, was now disagreeable; and if strong, intolerable; and, in short, all her relations to different substances took a new and very different form.

All these experiments were at different times repeated, and with exactly the same results. She could hardly endure the position from west to east, or that from east to west more than a minute, without feeling all the symptoms above described with a tendency to syncope, and recovered instantly when the position was changed to that of north to south.

As she had long been affected with a gradually increasing illness, the author inquired if at any former period this sensibility to position had occurred, and it appeared that she had lived in different houses, and had suffered uneasiness in some, while in others she had felt comfortable, without the cause being known. Her brother was now told to take a compass and ascertain the position of her beds in the different houses, as well as of her couches and work-chairs. It was found that in one house her bed and couch had accidentally been almost exactly in the magnetic meridian, and that she had lain with her head toward north, not toward south. In another house she had lain in a line north-east and south-west. In fact she had been comfortable in the former, while in the latter she had always suffered and struggled with illness. Even now, without knowing why, she could not bear to sit across her bed or sofa, neither could she lie on the sofa, but could only bear to lie in bed. In the first case her position was from west to east, in the second east to west, in the third south to north; only in the last could she obtain the indispensable position from north to south.

Of all positions, the worst by far was that from west to east, that is, the head to the west.

64. Mad'lle Sturmann, in consequence of violent dancing, three years before, was attacked by her illness. She now suffered from tubercles in the lungs, and was subject to cataleptic attacks. The author found her lying in the position from west to east. In this position, the great magnet (carrying 80 lbs.), placed above her head or under her feet, had hardly any effect. She was then placed in the position from north to south. The change was instantaneous. The patient at once expressed a feeling of comfort, the previously existing restlessness ceased; a painful sensation of heat in the eyes, which had constantly annoyed her, disappeared, and in its stead she felt an agreeable coolness; a universal relief obviously spread over

her whole being. Then followed a night of singularly sound sleep, such as for a long time she had not had. Another time the position from south to north was tried, with an equally rapid change for the worse: general restlessness, flushing, oppression of the head, and burning sensation in the eyes, at once returned, and all were, so to speak, as easily put an end to as soon as the patient again occupied the position from north to south. While she was in this, the normal position, the author again tried the magnet. But what a change! At the distance of 4 paces from the head, he removed the armature of the magnet. The patient did not speak, and was found insensible and affected with tonic spasms. After her recovery, he again, at 7 paces from her feet, removed the armature, and she had hardly spoken a word when she became speechless, and fell again into the same state. A third time he went, in the line of the magnetic meridian, as far as the ward permitted, upward of thirty feet from her feet. When the armature was removed, she did not instantly feel anything, but after about a minute she ceased speaking at once, in the middle of a word which was actually on her tongue. She was suddenly seized, and was found lying in convulsions, with clenched hands, her eyes open and turned upward; so unconscious, that he could lay his finger on the cornea without her moving the eyelids. What a difference of effect! The same magnet which had been placed above her head and under her feet without any marked action, while she lay in the line of a magnetic parallel, now, when she lay in the meridian, struck her down senseless at the distance of 30 feet.

55. Mad'lle Maix, who was neither cataleptic nor somnambulist, gave similar results; she could only endure the position from north to south, and that from west to east, was of all the most intolerable. In her case the experiment was tried in the afternoon, while with Mad'lle Nowotny it was in the forenoon.

66. Mad'lle Reichel also perceived a very marked difference; and as the author found her bed in the position from south to north, he recommended a change to that from north to south. From this change she derived much benefit, her rest being much improved.

67. Mad'lle Atzmansdorfer, on two occasions, one in the morning, the other in the evening, could only bear the position from north to south, and found that from west to east the most disagreeable.

68. All these patients now recollected how painful and disagreeable it had always been for them to remain in church, although they could never tell why. But as all Catholic churches are built from east to west, those in front of the altar are necessarily in the position from west to east, to which to all sensitive persons is the most intolerable. In fact, these patients, in that position, had often fainted and been carried out of church. At a later period Mad'lle Nowotny could hardly ever bear to walk in the garden or on the street from west to east, if it lasted for some time.

69. Thus, eight different cases of sensitive individuals agreed in this, that every other position, except that from north to south, is highly disagreeable, but that from west to east almost intolerable, at least in our hemisphere. Probably in the southern hemisphere it is otherwise. The cause of these phenomena can obviously be found only in that great magnet which is formed by the earth with its atmosphere, that is, terrestrial magnetism. Like any other magnet, the earth interferes, and we thus arrive at the following law:—The terrestrial magnetism exerts on certain persons, both healthy and otherwise, who are sensitive, a peculiar influence, powerful enough to disturb their rest, and in the case of diseased persons disturbing the circulation, the nervous functions, and the equilibrium of the mental powers.

70. And since terrestrial magnetism is subject to variations, which are in connection with the lunar phases, insomuch that the terrestrial magnetism reaches a minimum, in reference to the moon, at the period of full moon, one of the causes which influence insanity comes out of darkness at least into twilight. On this point the author promises to return to the subject when the special investigation of it is further advanced.

71. If now terrestrial magnetism appears to be so powerful an agent on our bodily condition, that, in the above cases, it in a great measure decided the question of healthy and morbid feelings, we are entitled, nay compelled, to conclude that in most, perhaps all similar sensitive cases, it will be impossible to produce any curative effect by the magnet, as long as the patient is not placed in a proper position with reference to the earth's magnetism; and that this point must be above all others attended to in all magnetic treatment. We must also conclude, that all magnetic phenomena in persons affected with nervous maladies, and probably also in those affected with other diseases, are essentially influenced by this cause. These observations likewise furnish a key to many of the numerous errors and contradictions which have occurred in animal magnetism, from the time of Theophrastus and Mesmer to our own day, which have confounded the clearest heads, and have introduced everywhere contradiction in the facts and discord in the opinions. For if the same disease were treated magnetically in Vienna in the position north to south; in Berlin in that of east to west; and in Stuttgart in that of south to north, totally different results would be obtained in the three cases; and no agreement in the experience of the different physicians could be obtained. Nay, if the same physician, at different times, or even at the same time in different places, were to treat the same disease with the same magnetic means, while accidentally the beds of his patients were placed in different positions, he must necessarily see quite different results, so as to be entirely puzzled with magnetism and with himself. He must conclude it to be full of caprice and change; and finding it impossible to foresee and regulate its action, reject magnetism altogether as an

unmanageable instrument. Such has been in fact, the sad history of magnetism. From the earliest times, often taken up, and as often cast aside, it now lies, almost unemployed, and yet is so distinguished, so penetrating, nay, we may say, so incomparable a means of relief in cases where man has hitherto been unable to afford any benefit. Nervous diseases are still the *scandala medicorum*. It may be confidently expected that ere long an improvement will be effected. The all-powerful influence of terrestrial magnetism will be measured and calculated, and the whole subject of magnetism will now admit of being regularly studied in reference to medicine. Progress will be made; experimenters will mutually understand each other; and the world may at length hope to derive some actual benefit from those extraordinary things, which have so long excited expectation without satisfying it. Having thus established the existence of a powerful influence exerted by the earth's magnetism on the magnetic phenomena in sensitive persons, all subsequent magnetic experiments were made with the patients in the position from north to south, which is considered by the author as the normal position for the living body, sensitive or affected with nervous maladies.

72. When a piece of pure soft iron is placed in contact with a magnet, it becomes, for the time, magnetic, and attracts iron. But as soon as the contact is put an end to, the iron ceases to be magnetic, and to attract iron. However often it may have been streaked with a magnet, it retains no magnetic power, strictly so called. It is generally supposed that, in this experiment, the iron returns exactly to its primitive condition as soon as the magnet is removed. But this is not entirely the case. It is true that we have hitherto had no test of any change in the iron; but the diseased human nerve is such a test. Thus, if a bar of soft iron, previous to contact with a magnet, was placed in the hands of Mad'lle Nowotny, she found it quite indifferent; but after it had been in contact with a magnet, the case was very different. It now caused the same sensations as a weak magnet, such as warmth and contraction of the fingers; and this power lasted for a short time, gradually diminishing, until after 10 minutes it had disappeared. Similar experiments were made with the other sensitive patients, and in all the same sensations, except the contraction of the fingers, were experienced as in the case of a magnet; the patients felt as if the force of the magnet were transferred to the iron, although somewhat enfeebled. It is therefore obvious, that something must have remained in the iron, derived from the magnet, but which was not magnetism, and the nature of which is still unknown.

(To be continued.)

ART. IV.—WONDERS OF THE NINETEENTH CENTURY

A few of my readers, perhaps, may give me no thanks for introducing to their acquaintance a great many things which they are not prepared to believe, and possibly some which they are not even willing to investigate. But I trust there are very few who are not disposed to sympathize with free, bold, and patient inquiry—very few who wish to stifle investigation or to scoff at those who believe more than themselves. At any rate, I shall go on publishing freely whatever of interest these eventful times produce.

The greatest wonder of these soul-stirring days is the wide-spreading conviction of intelligent men that the spiritual world is coming into free and open connection with our every-day life, and that spiritual beings are beginning to become audible and tangible to our gross and earth-mixed senses. The wonderful developments of Auburn and Rochester, related by Messrs. Capron and Barron are beginning to display themselves in a bolder and more conspicuous manner. The parties to these displays—Mrs. Fish and the Misses Fox have visited the city of New York where they have been holding spiritual communications in the presence of a number of our distinguished literati whose reports have been highly favorable. They were invited to a party at the house of the Rev. Dr. Griswold, where among the distinguished gentlemen present were the poets Bryant and Willis, the novelist Fenimore Cooper, Mr. Bancroft, Rev. Dr. Hawks, Gen. Lyman, Dr. Francis, Dr. Marcy, Mr. Tuckerman, Mr. Ripley, Mr. Bigelow, and other literary gentlemen. The experiments, rappings, and answers on these occasions, as described by gentlemen present (in the Tribune, Home Journal, and Evening Post), were about the same as usual. The answers were given freely and correctly to Mr. Cooper, Dr. Francis, and Mr. Tuckerman, describing deceased persons whom they had in their minds. Dr. Hawks did not succeed well in getting answers and with the rest of the company the spirits declined communicating.

The physical manifestations however were very striking, and we are much indebted to N. P. Willis, of the Home Journal, for the direct and frank way in which he has spoken out of what he saw. The following extract from his leading editorial in the Home Journal is quite interesting:

“The two Misses Fox, as well as their married sister, have nerves so plumply clad in health and tranquillity, that it is difficult to reconcile their appearance with the fact that they have been worked upon, for two years, by the phenomena of unexplained visitations; and, indeed, throughout the evening, we were struck with

their combined good-humor and simplicity, and the ease and unpretendingness with which they let their visitors (from both worlds) have their own way. They evidently won on the respect and liking of all present, as the evening went on.

"One little peculiarity, hitherto unremarked, came to our notice. The questioner's seat, to give him access to paper and pencil, was on one side of the table, and, chancing to occupy the place between him and the ladies, we had accidentally thrown our arm over the back of his chair. Whenever the knockings occurred, we observed that his chair was shaken, though our own intermediate chair, and the two standing immediately behind, were unmoved. We called attention to it, and it was corroborated by the other gentlemen. With such heavy weight in the chair as Mr. Cooper's, or Dr. Francis's, it would have taken a blow with a heavy hammer to have produced so much of a vibration. That spirits can exercise mechanical force at all, is something new to believe. And the law of mechanics would be equally puzzled (cavilers insisting that the ladies themselves produce these noises and vibrations) to explain how Mr. Cooper's chair was shaken, when we aver, that, between their petticoats and him, we sat unmoved, positively cutting off all physical and mortal communication. We may add that the ladies gave no particular attention to the phenomena, talking willingly to any one while the knockings were going on. Later in the evening, it was proposed to the Spirits to let us see them move the table across the room—a feat they are said to have done—but they were not in the humor.

"An experiment was tried, as to what the Invisibles would do with one of the ladies alone, or with two without the third, or with a gentleman, and one or two of the ladies. The strongest knockings were on the floor beneath, when the widow and her two sisters stood anywhere together. With two of them the knocks were fainter. We placed ourself between the widow and one of the young ladies, and the spirits would have nothing to say to them in our company. To one of the virgins, or to the widow singly, there was no demonstration. The spell, evidently, is in the combination and close locality of of these three. Yet it seems communicable, with neighborhood and time. Mrs. Fish mentioned that, in Rochester, the knocking visitation *had spread*, extending, at present, to twenty or thirty families. If it is to 'spread' the world over, and if we are all to have spirits at our command, *such as are already proved to be able to shake chairs and move tables*, there will soon come a Fulton or a Morse, who will put this ghost-power into harness, and it will follow Steam and Electricity in doing man's work for him. Things really look like a removal of *man's* curse at the Fall, labor; and, if chloroform do as much for *woman's* curse, so that she will no longer 'bring forth in sorrow,' we do not see much hindrance in the way of an early Millenium. It would be wise, we fancy, pretty soon, to wash our hands and

take a holiday a little oftener, that 'all play and no work, may not prove rather tedious than otherwise, when it comes, after all!

"With three men on the outside of a door and three on the inside, watching it closely, that door could not be so violently knocked upon as to tremble, though no visible force approached it, without giving one something to believe. We witnessed this, with one hand upon the panels, and what can it be, but the exercise of a power beyond anything of which we have hitherto known the laws? That it is to be subject to human control seems probable, for it acts, at present, in a certain obedience to human orders, and is most obedient to those who have used it longest. There seems an alphabet to learn, in this as in other new fields of knowledge; and, indeed,—considering the confusion of ideas in the minds of those who visit and try to talk off-hand, with these newly discovered 'natives,'—it is wonderful that the Knockers make themselves as well understood as they already do. If Providence designed to subject an *intelligent* power to our service—(in addition to the *unintelligent* miracle-workers, Steam and Electricity, which have successively been given us)—the beginnings would, by all precedent, be at least as imperfect and dimly understood as these are.

"The suggestions and 'outside' bearings of this matter are many and curious. If these knocking answers to questions are made, (as many insist) by *electric detonations*, and if disembodied spirits are still moving, consciously, among us, and have thus *found an agent, at last, ELECTRICITY, by which they can communicate with the world they have left*, it must soon, in the progressive nature of things, ripen to an intercourse between this and the spirit-world. The failure of the 'Cincinnatians' to establish their 'clairvoyant telegraph,' three or four years ago, may have been owing to the fact that the new power is an intelligence, and will not be basely employed to 'fetch and carry' for trade. But we understand it has consented to be employed for healing. A report was made to the Homœopathic college, of New York, recently, that a physician had employed these Knockers to consult the Spirit of Hahnemann as to a case despaired of, and the instructions given in reply had been followed, *to the cure of the patient*. The 'Knocking' differs from clairvoyance, in the fact, that the Spirit, in the former case, *speaks first*—and it is an advance upon clairvoyance, of course, as Spirits know where they can be of use, better than we, and are more at leisure to knock and tell us, than we to look up a clairvoyant. But then comes the wonder, how those, who have got well out of this world, should either wish or consent to have anything more to do with it! Or is it as schoolmasters go back to mix with children for their good, or as missionaries fall behind, in the march of civilization, to carry light to the benighted heathen who are coming on rather too slowly?

"We were very glad to see Mr. Cooper interested in the 'Knockers,' the other evening, for he is one of the few men not

afraid of the world, and whatever he sees and believes, with his logical and bold mind, he has the courage to tell, and tell well. The numerous places in which these Knockings have been heard, within the past year, show that the ghosts at large have got the trick of it, and the 'demonstration,' altogether, to our thinking, is of sufficient extent and respectability to warrant grave attention. An electric telegraph across the Styx, before they get one across the Atlantic, would make death less of a separation from friends than a voyage to Europe—but there is no end to the speculation on the subject, and we leave it with our readers."

A gentleman living in the midst of these phenomena, in western New York, writes under date of June 8th as follows:

"The demonstrations continue to spread and make new converts. Many are firm in the faith that they are from hell and the devil; and others as earnest in the belief that they are angels from upper spheres. I can concur in neither opinion. The spirit world, like this, is composed of ignorant and intelligent—all governed by the great law of affinity. There, of course, men will find spirits of their own affinity, to converse with, and time will show that the sources of these communications are not infallible, as all evil, or all good, but a mixture.

"Some of us who are in the midst of these demonstrations will be happy, at some future time, to furnish you for publication a cool, calm, impartial article upon the subject."

A letter received by a gentleman of Pennsylvania contains the following passages:

"You wish to know about the possibility of extending these communications. So far as the actual conditions necessary for a medium are concerned, I have never yet been able to ascertain. It evidently is not all clairvoyants that can be a medium. * * * The spirits either do not seem perfectly to understand the law themselves, or they judge it not best to give the world the full secret at this time. Whenever and wherever it appears in a new place it seems to come as if by accident and take them by surprise.

"I have not succeeded in getting any spirit to agree to communicate with you through your sister, or otherwise. We do not often succeed in such requests, except in a general way, and the answers are 'tell them to be patient, they will hear it soon.' All the spirits that communicate agree that the time is not far distant, when all that are desirous will be able to communicate with their friends. I am much inclined to believe in the prediction made by several spirits that a very general communication will take place during the present year."

Still more wonderful announcements will be given in our next number. A private letter gives details of some phenomena more remarkable than any that have yet been mentioned.

Familiar Table-Talk.

NEUROLOGICAL INVESTIGATION.—The venerable Prof. Caldwell, of Louisville, has been appointed by the National Medical Association of the United States to report upon the truth and practical value of Phrenology and Mesmerism. The following familiar letter will show the prompt and common-sense course pursued by Dr. C. in investigating the subject. He goes directly to the point, and will, therefore, be able in all probability to make a truer and more satisfactory report upon these subjects than has ever before been submitted to any distinguished society of the medical profession. The report will be made at the next session of the Association, May, 1851, at Charleston, S. C. It is a little remarkable that Dr. Caldwell alone should have been chosen to make this report, for the reason that there were no others in the Association whose knowledge of the subjects would render them serviceable, or who were suitable to be associated with him in such a task. Such a state of things is certainly a signal reproach to the medical profession of the United States. But however deficient the members of the National Association may be in the knowledge of anthropological science there are many private members of the profession, in different parts of our country, who would be competent and willing to do justice to such subjects.

"Louisville, June 5th, 1850.

"My dear Sir:—I address to you this letter merely to say, in reply to yours of 'Sunday night,' that my purpose at present is (should no preventive intervene) to take passage on Sunday, the 9th instant, for Cincinnati, in the Ben Franklin, and (accidents excepted) I shall arrive in your city on the morning of the 10th, and reach your chateau before breakfast, prepared to be your guest for a couple of days—or possibly three—for I must return, if not on Wednesday, certainly by the same packet, on Thursday. I trust therefore your seer-boys will be ready for action; for I am truly anxious to witness the experiments contemplated. I will bring with me a number of letters written by different persons of different characters and degrees of standing. And, though I wish you success in the business, as earnestly as you do yourself, I will notwithstanding observe and scrutinize the process with all the keenness I can summon to my aid. I will also have with me some pamphlets for your acceptance, if they be worth it.

With respectful compliments to Mrs. B. and the family, I am, my dear Sir,

Yours very truly,

CH. CALDWELL."

Monday and Tuesday and a portion of Wednesday were occupied in a delightful manner, by the visit of Dr. C., and a course of experimental demonstrations of the science, in which we were jointly engaged. Of the nature of our experimental course and the philosophy thus demonstrated, nothing need be said at present. The reader may look with confidence for an able exposition of the present state of Phrenological science in the report of Prof. Caldwell, next year, as the reports of the Association are regularly published in their Transactions.

LETTER FROM A PHYSICIAN IN MISSOURI.—*Extracts.*—"Permit me, Dr. Buchanan to assure you that I have read your Journal of Man with more interest and gratification than my most sanguine expectations anticipated. I wait impatiently for each number, for I know that it will contain novel and scientific research, in an original direction, uninvestigated by the minds of any save that of its discoverer. I will relate a few experiments illustrative of the promise which you assured your readers they should witness. I have performed numerous and satisfactory experiments to my own mind, the results in some were astounding. The experiments with medicines were upon the sick. The first was upon a young lady who was then confined with consumption. Her pulse at the time was over one hundred to the minute. I enveloped carefully so as to conceal from her the contents of the paper, and placed it in her hands. In a few minutes she complained of a burning in her hands, which traveled up her arm to the body. She said it was a stimulant and, in short, she just told the name of the article (Capsicum). The pulse was reduced in number fifteen to the minute in about fifteen minutes. An active cathartic was now placed in her hands, enveloped in paper so as to conceal from her its contents. In about twenty minutes she said it was a cathartic, and in about thirty minutes it operated on her bowels. After this experiment she complained

of being hungry. The idea of satisfying the hunger next attracted my attention. I placed a piece of chicken breast, enveloped in paper, in her hands. In a few minutes she said she knew what it was; I laughed at her, because she said it was chicken and she could taste it. The experiment was continued about twenty minutes; she continued to affirm it to be chicken. I asked her if she was hungry, she said no. In the next place, saleratus was enveloped and placed in her hands; in a few minutes she said it was saleratus—she knew because she tasted it. It increased the frequency of her pulse and rather produced a coldness of the hands. In the next place, I thought I would arrest her cough and produce sleep; for this purpose, Beach's cough powders were enveloped in paper and placed in her hands. In six minutes she showed strong symptoms of sleep. I then suspended the experiment, and she fell asleep immediately. Previous to going to sleep she said, 'it is opium.' She rested finely all night. This terminated the experiments for the time. I have performed a great many other amusing experiments on her. In relation to experiments with medicines she is not the only individual upon whom I have witnessed decisive and satisfactory results. In experimenting with autographs, the results have been more than I anticipated, and entirely conclusive. I have no more doubt of the truth of psychometry than I have of my own existence, and phrenology is no longer a science of observation, in my mind, but one of positive experimental demonstration, so far at least as I have investigated the subject. I anticipate an immense amount of useful knowledge through the *Journal of Man*. May success attend your experimental and philanthropic labors."

FROM A PHYSICIAN IN MISSISSIPPI.—"Dear Sir:—I have had the pleasure of reading your *Journal of Man* including all the numbers up to this time. So far, I am well pleased and perfectly delighted. I find many new, strange, and interesting things to me. Though strange, I find a great many of the facts set forth demonstrably true; I have experimented but little yet, though enough to satisfy me that there is something great and valuable to grow out of your discovery of the impressibility of the brain; I find many inexpressible subjects, but mostly uneducated, though some educated, intelligent ones. I have applied letters to their heads and they have read characters well, could see the authors and describe them—and tell whether they were dead or living, &c. In fact, almost equal to any that you have described in the *Journal*."

SYMPATHETIC COMMUNICATION OF INSANITY.—Mr. N. C. writing from Howard, Illinois, relates the following incident of his brother in a letter. D. C., aged 62, a man of family and of good character, became some months since rather melancholy and at length absolutely insane. On the day of his first paroxysm he recovered sufficiently to perceive that he was likely to die soon in a state of derangement, and to arrange his affairs accordingly. He then relapsed into a furious delirium, in which his brother and sons were required to exert their force to prevent his inflicting injury on them or himself. N. C. says: "They had three physicians who could do him no good. While his two sons, Hiram and David, and myself were taking care of him, I stepped out into another room. I heard him say to his son David—'David, come here and let me feel of your head and see which is the biggest fool, you or I.' David did so, and by his feeling of his head, in a minute, he seemed to be as crazy as his father. He halloed tremendously, and drove his brother out of the room, exclaiming, 'It is true, it is true'—he jumped, stamped, and halloed. We took him into another room—he exclaiming—'There is gold in California—it is true, it is true—Jesus Christ has risen from the dead!' Hearing his father in the other room, he would repeat the same words after him. The neighbors were sent for and came, and some of them, with one brother, took him out. It was suggested to them that he might be mesmerized. His brother got him somewhat calmed down, and not being a full believer in Mesmerism, he took him behind a stack of straw, and went, as he said, to work like the Mesmerizers to throw off the influence. He found him to like it so, that he took him to another house, and brought him out, so that he has his reason since. My brother continued crazy, grew weaker, and finally died on the 12th of March." The foregoing is a very good illustration of the sympathetic communication of insanity. Thousands of instances of the sympathetic communication of disease escape notice because the parties do not suspect its possibility.

LETTER FROM FISHKILL, N. Y.—"Sir, I am pleased with the course adopted by you and pursued in your *Journal*. Adhering to the true deductions of science and condemning those who would bring it in disrepute by an overweening zeal. Your recent exposition of Electrical Biology, or 'Electrical Psychology,' as it is called in this section, is both truthful and just. It has been presented in our village, and completely disgusted all the better portion of our community."

FENGOLGY.—For the benefit of Mesmeric adventurers, I would suggest that the time has nearly arrived to re-christen their science (?) and bring forward a most astounding novelty under the title of *Fengology*. "Electro Biology," and "Electro Psychology" are already beginning to grow stale. With a slight change in the method of operating, it will be as easy now as heretofore to concoct a grand science. The following is respectfully submitted as a new scheme, which cannot fail to "astonish the natives" to the amount of \$5 or \$10 apiece, if boldly carried out. The operator should drop all wires, passes, and other familiar ceremonies. He should announce the discovery of mysterious powers in the human finger, and a wonderful relation to the brain. The subject should be required to sit perfectly still, and place his forefinger upon the forehead at the root of the nose. In this position he should fix both eyes upon the finger at its junction with the brow, and remain motionless until he ascends by slow degrees into the true Fengological state—after which he can be made to display all the usual phenomena, especially if the operator uses his own forefinger exclusively, after holding it a short time upon the brow in the same manner as his subject. The course of lectures upon Fengology should consist of six—first, upon the previous theories of Mesmerism, Biology, &c.—second, upon the etymology of Fengology—from fengah, a finger, or hook—and the physiology and psychology of the finger—third, upon magnetism generally, and the fengological kind especially—fourth, upon mental impressions—fifth, upon the ancient history of Fengology—sixth, upon the fengological treatment of disease and the great secret of operating, which cost the lecturer five years of profound study. Any young gentleman of talent, not encumbered with modesty or conscience, will find a course of lectures upon Fengology quite profitable in many parts of the country. If two lecturers desire to occupy the field, one can take Fengology and the other can establish the rival system of Auto-Fengology, characterized by each individual operating upon himself, independent of his teacher, by placing his left hand just above the epigastrium, while with the right forefinger he goes through the fengological process. Finally, if Fengology should wear out too soon, there are at least fifteen or twenty other different methods of displaying mesmeric phenomena, for which the dead languages will easily furnish dignified and sonorous titles, until the list of new sciences (concocted of old materials) shall exhaust the patience and gullibility of the multitude.

In making these suggestions I would offer no disrespect whatever either to Mesmerism, as a portion of anthropological science, or to any modest, fair, honorable, or scientific exposition of its principles and facts, but the amount of mesmeric charlatanism and ignorance, which has been turned loose upon the public, certainly requires to be noticed and rightly understood by the true friends of science.

"**NEW SYSTEM OF PHILOSOPHY; an Electrical Theory or Key to the Sanctum Sanctorum of the Author of Nature; written by E. D. Follet, for Nathaniel Chapman, Projector and Publisher, Bellevue, Ohio.** Sandusky city, Printed by D. Campbell & Son, Water-street, 1850."—Such is the titlepage of a pamphlet of 94 pages just received. Notwithstanding its odd title, it appears upon a hasty glance to be a much more substantial and vigorous production than the trashy electrical theories, which so often sprout from undisciplined minds. Not having time to examine it properly, I merely quote the following passage which exhibits its scope:

"From recent discoveries in electro-magnetism, showing that the electric fluid is susceptible of modifications, the attempt will be made to analogically prove that to the agency of electricity may be attributed all material motion, and that variously applied, it is the motive power of the universe. It will be made to appear susceptible of demonstration, that, associated with an intelligent principle, it is the life of nature, through whose vital energy, in connection with a mental agency, is carried on all her multifarious operations.

"As a preliminary step to the introduction of the reader into the Sanctum Sanctorum of the Author of Nature, the following proposition is submitted to his consideration: 'All tangible things with which we are acquainted, have their particles arranged about a common center; are bounded by continuous or circular limits; all are in motion, either in parts or in the aggregate; and all their motions are curvilinear.' If any one doubt the truth of this proposition, let him attempt to prove to the contrary, and the more he investigates, the more convincing will be the proof of its reality."

In the application of his principles to astronomical and physiological phenomena the writer displays much ability—whether or not he is accurate in his facts and reasonings I have not time to inquire. The following sentence shows the result which he professes to have attained:

"It is not pretended that the nature or essence of creative power has been defined, but that its mode of action, in beginning, carrying on and completing the ceaseless process of creation, has been discovered."

MR. VAUGHAN says, in a recent letter, "I have lately extended my researches to the departments of human physiology, and I have been successful in accounting for nervous sensation, for the phenomena of intermittent fevers with several circumstances connected with them, and I have also succeeded in demonstrating your doctrines on neurology on the principles of chemical and electric action. Though I did not intend to publish anything on the subject until they appear in the work I am preparing, I shall in a few days send you a concise exposition of these doctrines, as I know they will be interesting to you."

EDUCATIONAL PROGRESS.—The first number of a weekly paper, published at Lexington and Louisville, Ky., entitled "*The Progress of the Age*," edited by D. J. Elder, is just received. Mr. Elder is a successful and original teacher, and his paper is devoted to educational as well as general improvement. His principles of education are similar to those which have been presented in the *Journal of Man*. As to their practical success, Mr. Elder says, "I have scholars in my school, at Lexington, Ky., of from 6 to 9 years of age, with from 5 to 18 months training from the alphabet, upon principles according with Dr. Buchanan's views on education, in advance in spelling, reading, writing, arithmetic, geography, English grammar, and algebra, of those who have been from 3 to 7 years under the common systems of education."

MR. J. C. ZACHOS of the Cincinnati Female Seminary, announces in his last circular the successful adoption of those principles for which this *Journal* has contended. He says, "The method of instruction adopted in this Institution is almost entirely oral. Each teacher will be prepared to instruct the class on the subject of study by lecture, without requiring of the members of it, the use of any particular text book, except for illustrations in science, or for the reading of languages. The method of study to be adopted by each pupil is by notes taken in the class; these expanded into abstracts more or less full, and by synthetic or analytic recitations of the subject by the pupil, without relying on questions by the teacher." He testifies to the success of this method as follows:

"All such objections to the system are met by us, by the simple fact that we have tried it, and know that it will work, and better than any other that prevails in the present state of school education, of which the suffrage of our pupils universally and heartily given is the best proof."

The Cincinnati Female Seminary, it appears from its circular, "has been now in operation in this city, for more than seven years. During the course of the last academic year, it has numbered, for the most part, above a hundred pupils. It has employed the whole time of five teachers, and the partial attention of five others."

Teachers of Ohio! will you not look again at the *Journal* for May, 1849—and study those principles which Mr. Zachos and Mr. Elder have thus demonstrated?

SOMNOLIZING BY CLOCKWORK.—"A new form of Mesmerism" has been announced at Bristol, Connecticut, resulting from the attempt of clockmakers to set their chronometers going. "When the whole movement is going (says the N. Y. Post) any person who sits down and counts the beats or watches the motion of the balance, invariably becomes drowsy. Attempts have been made with other clocks but they do not produce the same sensation. The clocks are of polished work and gilded by a peculiar galvanic process. The person who is put to sleep continues to count the beatings of the time with his hand or foot." "It affords some amusement to visitors (says the Boston Post) to see a company of men at work and half of them asleep, yet laboring to keep themselves awake. Experiments have been made with strangers and it invariably produces the same effect. On Saturday last a collier came to the factory with a load of coals, and was admitted into the finishing room to see the clocks. One of the workmen desired to make the experiment, accordingly the old man was put to count, striking on the bench with his hand in time with the clock. He went to sleep in three minutes, and was kept under the influence for nearly an hour. His dog that had followed him into the room, upon discovering his situation exhibited alarm and ran about howling in the most dismal manner. All this did not disturb the sleeper, but the moment the clock was stopped he awoke, and was surprised that so much time had passed." In regulating these clocks it is necessary "to count the beats in a minute by a regulator, and change the hairspring until both go nearly in time," during which the drowsy influence becomes apparent.